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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/754,805	01/04/2001	Harold R. Blomquist	TRW(VSSIM)4910	3482

26294 7590 03/23/2004

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EXAMINER
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MILLER, EDWARD A

ART UNIT	PAPER NUMBER
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3641

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/754,805

**Applicant(s)**BLOMQUIST, HAROLD R. **Examiner**

Edward A. Miller

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

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1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schotthoefer et al., in view of Meyer, Lauritzen et al., Brocart, Leneveu et al., and Boileau et al.

Schotthoefer et al., in the Abstract, e.g., teach a known air bag inflating, occupant protection apparatus. This apparatus includes, in Figure 1, a squib portion 42, which comprises the ignition material for gas generating material 18. This is further described in col. 4, lines 1-17. It is notoriously well known that squibs include an explosive composition as the ignition material which is ignited by the (exploding) bridge wire. As to this, applicant may consult the definition for class 102, subclass 202.7, indented under 202.5, "electrical primers or ignitors," as previously set forth. The gas generating material 18 is taught at col. 4, line 13 to include single base nitrocellulose. This is the basic requirement for applicant's invention as claimed. However, this does not teach the use of a stabilizer. Of course, single base nitrocellulose propellant is and has been notoriously well known in the art, even a quarter century ago, and one would not expect usual, ordinary details to be specified since they are well known. Meyer, an Explosives Handbook, shows on page 132 that single base powder, e.g. nitrocellulose powder, is nitrocellulose which may include additives, particularly stabilizers, and which, about 3 lines prior to the Nitroglycerine powder (double base powder), specifically and additionally teaches Centralit as an exterior coating. On page 248, Centralit is a urea stabilizer formed for each kind of Centralit from an aromatic amine where the amine forms a nitrogen portion of the urea. On page 238, single base powder has a stabilizer, but there is no teaching of how much one would use. Beyond the obvious answer of one would use enough to accomplish the required stabilization, Lauritzen et al. teach in col. 6, lines 46-55, that when an auto safety apparatus contain nitrocellulose, that is single base powder, one may use ethyl centralite

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stabilizer, and that the amount used relates to the temperature contemplated, in amounts up to 4%. That Lauritzen uses the single base powder for an igniter, does not lessen the factual or objective truth of the teaching relative to the temperature behavior of nitrocellulose. Regardless of use, nitrocellulose in an airbag apparatus is subject to the same temperatures, whether as the ignition material or as the gas generating material. Applicant urges that it would not have been obvious to use autoignition type single base NC for the gas generator propellant. This ignores the very clear teaching, at col. 6, lines 55-56, of “the up to 4% amount that is commonly used in nitrocellulose compositions.” [emphasis added.] In other words, this is not a specific igniter amount of stabilizer as argued, but instead this is a commonly used amount for NC compositions generally. Further, the relationship of the ignition temperatures and stabilizer amounts is set forth, whereby the ordinary artisan would vary such to obtain the desired result. The apparatus is located within the vehicle, subject to summer sun and potential use in hot, desert locations throughout the world. Thus, significant heat resistance is mandatory for such use. Brocart teaches compositions containing mostly nitrocellulose without energetic plasticizers, which may have 3% centralite stabilizer, in col. 3, “Table I”, the third composition. Leneveu et al., at col. 3, lines 45-55, uses 2% centralite for nitrocellulose powder, with an added spray of a small amount of a different stabilizer. Boileau et al. teach at col. 1, lines 30-36, together with the heat degradation teaching in col. 4, lines 60+, including “Table 1”, that heat degrades the amount of stabilizer remaining. This is another way of looking at the teaching of Lauritzen et al., that one may vary the amount of stabilizer depending on the heat expected, and the length of time. Although a different but generally equivalent stabilizer is used in Boileau et al., the invention there involves a different method of stabilizing, using zinc carbonate added with the usual stabilizer. Further, in Lauritzen et al., col. 3, the parameters of time or aging resistance with single base nitrocellulose powders when used in various auto safety devices are

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discussed at lines 3-15 and 34-54. Thus, it is perfectly clear that the stabilizers and amounts used are result effective parameters. It is well settled that optimizing a result effective variable is well within the expected ability of a person or ordinary skill in the subject art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), *In re Aller*, 220 F.2d 454, 105 USPQ 233 (CCPA 1955).

Applicant's arguments are not persuasive of error. In the first instance, applicant's arguments are basically that there is no anticipation. This is clear, as the rejection is for obviousness, under 35 USC 103. The amounts of stabilizer, and the specific stabilizer, would obviously be varied by one of ordinary skill in the art to obtain suitable results. Further, there are no unexpected results that would show unexpected results as to the invention as claimed. In this, although Brocart adds, for example, a small amount of cellulose fibers, and Boileau et al. adds a small amount of metal carbonate, there is nothing in the claims to exclude this, or to effect any unexpected result.

3. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

4. Any inquiry concerning either this or an earlier communication from the Examiner should be directed to Examiner Edward A. Miller at (703) 306-4163. Examiner Miller may normally be reached Monday-Thursday, from 10 AM to 7 PM.

If attempts to reach Examiner Miller by telephone are unsuccessful, his supervisor Mr. Carone can be reached at (703) 306-4198. If there is no answer, or for any inquiry of a general nature or relating to the application status, please call the Group receptionist at (703) 308-1113.

Miller/em  
March 21, 2004



EDWARD A. MILLER  
PRIMARY EXAMINER